

WHAT IS CLAIMED IS:

1. A process for making a nonwoven fabric having a low basis weight, comprising the steps of:

5 providing a hydroentangling device having a foraminous fabric-forming surface;

positioning a precursor web having a length on said device, wherein said precursor web comprises continuous polymeric filaments, said precursor web having a basis weight from about 10 to about 30 grams per square meter; and

10 hydroentangling said precursor web to form said low basis weight fabric by application of high pressure liquid streams thereto so that the filaments of said web are rearranged on the fabric-forming surface of said device,

said precursor web being hydroentangled at a rate of at least 80 feet/minute in a direction along the length of said web, without substantially altering the basis weight of said precursor web; and

15 removing the low basis weight fabric from said fabric-forming surface.

2. A process for making a low basis weight nonwoven fabric in accordance with claim 1, wherein

said hydroentangling device comprises a 23-mesh forming screen.

3. A process for making a low basis weight nonwoven fabric in accordance with claim 1, wherein:

said precursor web comprises bonded, continuous polymeric filaments.

4. A process for making a low basis weight fabric in accordance with claim 3, wherein

25 said precursor web is bonded no more than minimum tensile strength which permits winding and unwinding of said precursor web.

5. A process for making a low basis weight fabric in accordance with claim 4, wherein:

30 during said hydroentangling step, bonds in said precursor web are broken to unbond said continuous polymeric filaments while minimizing breakage of said filaments.

6. A process of making a nonwoven fabric having a low basis weight, comprising the steps of:

5 providing a precursor web having a length, said precursor web comprising spunbonded continuous polymeric filaments, and having a basis weight from about 10 to about 30 grams per square meter;

providing a hydroentangling device having a foraminous forming surface;

positioning said precursor web on said hydroentangling device;

10 hydroentangling said precursor web to form a low basis weight fabric by application of high pressure liquid streams thereto so that bonds between said filaments are broken, and the filaments rearranged on the foraminous forming surface, and

removing said fabric from said hydroentangling device.

7. A process of making a nonwoven fabric having a low basis weight in accordance with claim 6, wherein:

said low basis weight fabric has a machine direction tensile strength of at least about 1,472 grams per centimeter.

8. A process of making a nonwoven fabric having a low basis weight in accordance with claim 7, wherein:

20 said hydroentangling device comprises a wire mesh forming surface.

9. A low basis weight nonwoven fabric, comprising:

a web of hydroentangled 0.2 to 3.0 denier polymeric filaments, said filaments being arranged in a substantially uniform array on a hydroentangling device, having a foraminous forming surface;

25 said fabric having a basis weight from about 10 to about 30 grams per square meter, and a cross-direction tensile strength of at least about 827 grams per centimeter.

10. A low basis weight nonwoven fabric in accordance with claim 9, wherein:

30 said polymeric filaments comprise substantially continuous filaments.

11. A low basis weight nonwoven fabric in accordance with claim 9,
wherein:

said filaments comprise spunbond polyester filaments having about 1.5
denier.

5 12. A low basis weight nonwoven fabric in accordance with claim 10,
wherein:

said web of hydroentangled polymeric filament is formed from a
spunbond precursor web which is bonded no more than a minimum tensile
strength which permits winding and unwinding of said precursor webs.

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